

HYDROGEN DEVOID OF CARBON MONOXIDE PRODUCED FROM A REFORMER ABSTRACT

A method to produce hydrogen, substantially devoid of carbon monoxide, by way of reforming is disclosed. Vaporized solvent, containing carbon monoxide and water vapor, is conveyed to a reformer. Steam shifting of carbon monoxide, formed in addition to hydrogen formed by reforming, is employed to shift some of the carbon monoxide to carbon dioxide and hydrogen to produce a gaseous hydrogen mixture. Remaining carbon monoxide within the gaseous hydrogen is scrubbed with a solvent capable of dissolving carbon monoxide to dissolve carbon monoxide contained within the gaseous hydrogen mixture. Following separation of the solvent containing dissolved carbon monoxide from a gas containing hydrogen substantially devoid of carbon monoxide is produced. The solvent containing dissolved carbon monoxide is subjected to vaporization to form vaporized solvent containing carbon monoxide for utilization in the reformer. Vaporized solvent containing water vapor is combined with vaporized solvent to form vapor to be transformed to hydrogen .